Small Farms Research News

USDA, ARS, SPA

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Changing How We Do Business

. The theme of the second issue of the Center's newsletter is how the federal government is changing to better serve the American public and the activities that ARS and the Center are undertaking as a part of this change. This theme deviates a bit from our mission of research and technology. However, issues and activities related to providing better service to Americans and American agriculture are important to the overall mission of the Center. (Continued on right column)

Center Held A Mini-field Day in October

Over the past year local farmers, ranchers and other agricultural professionals have visited with the staff at the Center to help us improve the Center's program. The Center wanted to recognize these individuals for their help by inviting them to a mini-field day that was held on October 7, 2000. Approximately 25 visitors gathered at the Center just after the lunch for the event. Upon arrival, visitors were asked to participate in a test tasting panel to compare a lamb product to that of filet mignon. The lamb product is being developed at the University of Arkansas, and the lamb product served at this test tasting panel was made from hair type sheep raised at the Center. During the course of the afternoon visitors toured four sites at the Center: 1) An experiment examining the loss of soil and nutrients from a 20-year-old stand of pine trees as a function of needle harvests; 2) Various plots evaluating native grasses and grass establishment technologies; 3) A experiment examining the productivity of forage production in a six-year-old pine plantation; and 4) A tour of one of our new cattle working facilities. Thanks to everyone who attended the mini-field day.

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Laws Important to Changes in Government.

The U.S. Congress passed two important Acts in the second half of the twentieth century that profoundly change how the federal government operates. Chronologically, the first of these Acts was the Freedom of Information Act (FOIA), which was passed in 1967 and amended in 1974 to strengthen the statute. The underlying belief of FOIA is that the American public has the right to know what its federal government is doing. A second principle underlying FOIA is that government is accountable for its actions and only an informed public can serve as its watchdog. Each government agency must publish a description of its operations and procedures to comply with FOIA. Agencies may withhold information described under nine categories to protect national defense, matters related to ongoing litigation and individual's privacy. Any person or organization can obtain additional information through a formal request procedure. Agencies and their officials withholding requested information not within the nine excluded categories can be severely punished.

The other Act that enables the American public to have more control over their federal government is the Government Performance and Results Act (GPRA) passed in 1993. Implementation of GPRA occurred incrementally through the 1990's. The purpose of GPRA is to improve the effectiveness and accountability of Federal programs. The mechanism by which GPRA intends to accomplish such a purpose is mandating that virtually all Federal programs will develop strategic plans with measurable goals. It will be interesting to see if future historians will regard GPRA as the landmark legislation of the Clinton's presidency.

How will such strategic planning make government better? If interested parties believe that the strategic plans and goals of a federal program are not a wise investment for federal dollars, public pressure expressed through Congress will result in reductions or elimination of programs with little public support. The public can have greater control of federal programs by being knowledgeable of the objectives and actions of federal programs.

Let's examine a fictitious example of how GPRA could work to benefit the American public. In this example, let's assume that people receiving Social Security have successfully argued that since their monthly payments are "their money" they should have those funds in their hands by noon on the first day of every month. To meet such a public need, the Social Security Administration would analyze their current procedures for monthly disbursements, identify the steps that prevent disbursement by noon on the first, and then develop a plan to meet this program objective. The plan would contain a timetable with measurable goals. For instance, a step in the process with a measurable goal might be to sign-up 80% of recipients for direct deposit of their monthly payments by January 1, 2001.

The intended outcome of the GPRA and FOIA is to inform the American public of what federal programs have done in the past and what these programs plan to do in the future. The American public can use this information to support programs they deem as being of value and argue for elimination or alteration of those that do not have public support.

How is ARS doing to comply with GPRA?

The way that ARS operates has changed since the passage of GPRA in 1993. ARS is the primary federal program that conducts agricultural research. As such, ARS is a network of over 100 locations, 2000 scientists and 8000 employees with a total budget in the current fiscal year of just under 900 million dollars. Prior to the passage of GPRA, ARS's research program tended to appear as a collection of research projects rather than a highly coordinated research program. In the last 5 years ARS has undertaken the development of national programs to: 1) better coordinate similar research projects at various locations; 2) better communicate how research projects at various locations seek solutions to national problems in agriculture; and 3) provide a framework for strategic planning that seeks solutions to national agricultural problems.

There are currently 22 national programs grouped into one of three broad areas- Crop Production, Animal Production, and Natural Resource Conservation and Sustainable Agriculture. Each research project was assigned to one or two of these 22 national programs. Each one of these national programs was assigned the task of organizing a workshop in which interested parties from throughout the U.S. would meet with ARS administrators and scientists. The objectives of these workshops were two-fold: 1) to gather input from interested parties on what the goals of the ARS's national program should be; and 2) to begin constructing a strategic plan to meet specific goals by ARS scientists and administrators. The intended outcome is a research program that meets the needs of those interested parties rather than curiosities of the scientists.

An important outcome of the planning is a written statement describing the research's objectives and how the research will be conducted in broad terms. The participants of the workshop and other interested parties are encouraged to comment on the draft statement. Such information is readily available from the internet (www.nps.ars.usda.gov). After comments are gathered, a revised statement of objectives and general research plan is used as the template to create the research projects at the various locations throughout the U.S. related to that national program.

Parties that are interested in ARS's research program are quite diverse and include farmers, ranchers, and others. Interested parties are routinely referred to as either stakeholders or customers. Customers are people who directly use the information and technologies that ARS creates. Customers can include farmers, ranchers, cooperative extension agents, regulatory agencies at both the federal and state level, and other federal and state agencies. Stakeholders are people who may not use the information directly but have an interest or stake in the use of the information. Stakeholders include: non-government organizations (NGOs) interested in natural resource conservation, people or groups interested in rural development and agriculture, farmer and landowner organizations, trade groups, etc. A workshop leading to the development of a national program needs to have a good blend of customers and stakeholders that represent most of the issues related to the national program throughout the U.S.

The approach to gather input from stakeholders and customers varies with national program. I was involved in creating the list of invitees for the workshop for Integrated Farming Systems National Program in the Natural Resources and Sustainable Agriculture division. About two dozen ARS employees on the planning committee spent hours collecting and narrowing the list of invitees. It was decided that a group in excess of 180 participants would not be practical. The planning committee started with a list of potential invitees that was several times larger than the number of participants. The following groups were invited:

- 22% ARS employees
- 5% Agricultural consultants
- 12% NGOs (rural development, environmentalists, etc.)
- 15% other federal agencies
- 35% farmers and ranchers
- 10% university professors
- 1% state agricultural agencies

Persons attending the workshop followed a similar distribution.

One thing that amazed me was that the issues/problems identified by stakeholders and customers tended to be similar. The Rangeland, Forage and Pasture (RFP) National Program, another program in the National Resource and Sustainable Agriculture division, is quite diverse. The research problems within RFP range from issues related to productivity and profitability of livestock production operations to the environmental and ecological aspects of land uses at local, state and regional levels. Early in the workshop for this national program, people with similar backgrounds were grouped together, farmers with farmers, environmentalists with like, etc. Each group was asked to identify the most pressing issues that a national program in RFP should have. That information is summarized in the table below:

Research Area	Invitee's Background			
0r Issue	Farmers	NGO's	Government	University
Grazing techniques	+	+	+	+
Water Quality	+	+	+	+
Pest management	+			
Economics	+	+	+	
Weed control	+	+	+	+
Natural resource protection	+	+	+	+
Assessment tools		+	+	
Science and Policies		+	+	
Improved forages	+		+	+
Technology transfer	+	+		
Coordinating activities			+	+

Many of the same issues were identified by each group, independent of background or grouping. In the next session of this workshop, the groups were a mixture of different interest groups/background. These mixed groups were also asked to evaluate the issues/problems that should be important to RFP national program. These lists were similar to those produced of the initial groups.

For the National Program on Animal Production Systems, the planning committee decided to gather the input from stakeholders and customers by commodity groups. Each commodity group, beef, dairy swine, etc., was asked to select a limited number of representatives. These representatives were tasked with the responsibility of representing the entire industry. This meeting may not have allowed ARS scientists and administrators to hear from a great variety of stakeholders as compared to a different format. The results were probably not much different than if an alternative approach was used to construct the invitee list.

In the past year there has been two workshops to address issues specifically related to small farms and historically under-served stakeholders. The first of these two meetings occurred in December, 1999 as part of the workshop for the Integrated Farming Systems National Program. The invitees to this workshop specifically contained a large proportion of farmers and parties interested in the viability of small farms. When this group was asked to identify the most pressing issues that ARS could address, the following issues ranked at the top:

- System approaches to research issues
- Research addressing production issues
- Approaches that overcome institutional barriers
- On-farm research
- Research on marketing and marketing approaches
- Better technology transfer efforts
- Environmental impacts of agriculture

A second workshop to identify the research needs of small farms and historically under-served stakeholders was held in November, 2000. When this group was asked to identify the most pressing issues that ARS could address those issues ranking at the top were:

- Research that is practical and off-station
- Enhanced technology transfer activities
- Greater partnering of stakeholders with scientists
- Greater emphasis on alternative crops and marketing strategies

The input from these two groups was similar and consistent with the information that local and regional stakeholders gave to the staff at the Center (see below).

Another change that GPRA has inspired is how research projects report their accomplishments annually. The Center has had a research project related to livestock production for many years. A sample of the 1996 annual report appears below:

> Cow-calf research evaluated Brahman- and Beefmaster-sired calves from Angus and Brahman dams on three forage systems: endophyte-infected tall fescue (E+) year around; E+ in fall and spring, common bermudagrass (CB) in summer; and endophyte-free tall fescue fall and spring, CB in summer. Breed group differences were similar across forages. Preweaning performance of calves was consistent with heterozygosity and time spent on E+ tall fescue. There was no particular advantage to either sire breed nor was rotation from E+ to CB beneficial. Evaluation of mastitis-causing organisms (MCO) in Angus, Brahman, and reciprocal-cross cows showed trends for heterosis in mastitis resistance and higher levels of MCO's on E+. Different concentrate supplements during the growing phase of ruminants consuming low- to moderate-quality grass impacted growth and body composition which influenced subsequent finishing phase performance. Effects of forage quality on animal performance related to the proportion of absorbed energy used by the gut plus liver, as well as to the total quality absorbed. These findings will aid livestock producers in decisions regarding economics of supplementing ruminants and contribute to optimal matching of animal to environment. Mixing soybean meal with broiler litter before deep-stacking increased the ruminal undegradeable protein concentration and enhanced the value of broiler litter as a ruminant feedstuff for feed manufacturers and livestock producers.

The report is essentially a listing of research findings.

Compare the 1996 report to that reported for a similar project in 2000:

1) What problem does this research address:?
   Small farm viability in the mid-south region is clearly tied to the profitability of the cattle industry. Tall fescue is widely grown as a forage throughout the region; however, consumption of tall fescue by cattle sometimes induces a collection of disorders called fescue toxicosis. Economic losses related to tall fescue toxicosis is due to reduced reproductive performance and poor growth of calves and stocker animals. We are trying to resolve this by doing research to formulate both livestock and forage management practices that promote growth and reproductive performance of animals grazing tall fescue.
2) What is the extent of the problem?
   The endophyte of tall fescue adversely affects cattle growth and reproductive performance and ultimately costs the beef cattle industry approximately 600 million dollars per year. Economic losses from fescue toxicosis disproportionately affect small-scale farmers because they are more likely to market and breed cattle produced on tall fescue.
3) What was the single most significant?
   Accomplishment during FY 2000 year:
   Losses while transporting feeder calves exhibiting tall fescue toxicosis can be unacceptably high. Research was conducted to determine the length of preconditioning and management protocols necessary to reduce heat stress symptoms in feeder calves grazing tall fescue. Following removal from pastures and placement in drylots, rectal temperatures of steers decreased from 103.8 to 101.5 degrees F and serum prolactin levels increased 225 percent within a 72-hour period. This information is of interest to livestock producers because it defines a preconditioning management protocol that reduces symptoms of heat stress.

The new reporting mechanism is designed to inform people of the problem that the research addresses and how the results will be used to help solve the problem.

To summarize, at the national level, ARS has changed its operating procedure. ARS has established a mechanism by which the public is a part of defining the goals and objectives of the national research programs. Second, ARS has developed a reporting mechanism to better inform the public of the importance of its programs.

What is the Center doing to comply with GPRA?

The Center has been actively involved in four National Program workshops in Soil Resource management; Rangeland, Forage and Pastures; Integrated Farming Systems; and Animal Production Systems, and a workshop to address issues specifically related to small farms and underserved stakeholders. The Center provided funds and made travel arrangements for four Arkanasan

beef producers to travel to the workshop for the National Program in Rangeland, Forage and Pastures. In addition, the Center encouraged several people from non-profit organizations concerned with rural development, cattle production and grazinglands to attend this workshop. The Center provided funds for three small farmers from Arkansas and representatives of four groups that work with small farmers to attend the workshop for the Integrated Farming System National Program. Therefore, the Center was instrumental in ensuring that voices from Arkansas helped to create these national programs.

The Center also has hosted several gatherings of groups dominated by farmers with the specific purpose of increasing the interchange between the Center's staff, local and regional farmers and other stakeholders. The first of these meetings occurred in February. The objective of this meeting was to gather information regarding local and regional research needs. A list of research objectives generated from this meeting follows:

- Better technology transfer
- Work closer with technology transfer people
- Small fruit production
- Value of retaining ownership
- Economics of cattle management practice
- Integrated poultry/cattle management
- Forage for specific conditions - for instance rocky areas
- Time/labor requirements of a management practice
- Forest resources management
- Alternative crops

In broad terms this list is not much different from those generated from national workshops.

In March, 2000, members of the Good Grazers Group had their monthly pasture walk at the location and were encouraged to comment on the research program. The Center invited farmers and other agricultural professionals who had visited the Center during the past year to attend a mini-field day in October, 2000. The objective of the mini-field day was to present to these individuals results from research projects that had reached a level of maturity.

The Center's scientists have made adjustments in the research program to address the issues raised by stakeholders. Participation of farmers in the research program has grown tremendously over the last 2 years. Two years ago there were no on-farm projects; currently the Center has started or plans to start 5 to 7 on-farm projects. In addition, the Center has three on-station research projects that directly involve farmers in their planning and execution. Some objectives of the existing research projects have been adopted to meet needs identified by stakeholders over the past year. For instance, current research on lowering the input cost for weaned calf production has been expanded to compare income and profits of selling weaned calves in the fall or over-wintering them and selling them as heavy calves in the spring. The Center is working much harder to make sure that research results are known to farmers, producers, extension agents, etc., rather than just appearing in scientific journals.

The Center has tried in the past two years to determine what the public wants from ARS and from the local program. The Center tried to take this information and transform the research program to meet these needs. The Center has also recognized that the public in general has not been entirely satisfied by the past efforts by the Center and ARS to tell its stories and accomplishments. I hope that the information in this newsletter demonstrates to you that we are trying to adjust the research program and increase our efforts to get the research results out to people who can use the information. Additional changes will be necessary in the future to meet our objectives concerning both the relevance of the research program and the effectiveness of our information transfer processes.

Dale Bumpers Small Farms Research Center is a partnership among three institutions:

ARS- conducts research related to livestock production and agroforestry; ARS staff can be reached at 501-675-3834.

PMC/NRCS- evaluation of vegetation and vegetation technology to retain soil and its productive capability; NRCS staff can be reached at 501-675-5182.

Division of Agriculture/University of Arkansas- dissemination of agricultural information. Extension Specialist, Billy Moore, can be reached at 501-675-5585.

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Why does a slight tax increase cost you $200 and a substantial tax cut save you thirty cents?

Peg Bracken

ARS Scientists at DBSFRC and their primary research focus

David Brauer- Agronomist/Research Leader investigating both agroforestry and livestock production

Glen Aiken- Agronomist investigating production practices for stockers

David Burner- Agronomist investigating agricultural production in agroforestry systems

Joan Burke- Animal Scientist investigating reproductive performance in cattle and production practices for hair sheep

Dan Pote- Soil Scientist investigating the effects of management practices on sediment and nutrient retention in agroforestry and livestock production systems

Organizations promoting agriculture in the Ozark Region

The information below is not an exhaustive list of organizations trying to help farmers and ranchers in the Ozarks. If your organization is interested in being included, please contact David Brauer.

Poultry Production and Product Safety Research Unit (PPPSRU)/ARS/USDA/Center of Excellence for Poultry Science is located on the campus of the University of Arkansas in Fayetteville. PPSRU conducts research to solve problems related to: 1) diseases and physiological disorders that are of economic important to the poultry industry; and 2) land application of waste from the poultry production. PPPSRU can be reach at by phone at 501-575-4202 or on the world wide web at www.uark.edu/~usdaars/.

South Central Agricultural Research laboratory (SCARL)/ARS/USDA conducts multi-disciplinary research for developing technologies to establish and sustain production and post harvest quality of alternative crops such as vegetables, small fruits and kenaf. The Laboratory is co-located with the Oklahoma State University's Wes Watkins Research and Extension Center in Lane, OK. SCARL can be reached by phone at 580-889-7395 or on the world wide web at www.lane-ag.org.

Shirley Community Development Corporation (SCDC) is a community-based organization formed to plan and initiate short and long-term development programs for Shirley, AR. and the surrounding communities. These programs focus on economic development, educational enhancement, youth job training and service projects that improve and strengthen the community. SCDC is involved in projects that research and demonstrate the skills and techniques needed for production and marketing of specialty, agricultural crops. The present focus is on log-grown Shiitake mushrooms. SCDC operates the Shiitake Mushroom Center as a training center. Recent additions to our activities include on-site production of garden bricks and stepping stones, raised bed herbal plots, twin wall polycarbonate greenhouse, and compost demonstration project. SCDC can be reached by phone at (501) 723-4443 or on the web at http://www.shiitakecenter.com/index.html.

The Kerr Center for Sustainable Agriculture in Poteau, OK offers leadership and educational programs to those interested in making farming and ranching environmentally friendly, socially equitable, and economically viable. The Kerr Center can be reached by phone at 918-647-9123, by email at mailbox@kerrcenter.com or on the web at www.kerrcenter.com.

ATTRA, Appropriate Technology Transfer for Rural Areas, is the national sustainable agriculture information center. ATTRA provides technical assistance to farmers, Extension agents, market gardeners, agricultural researchers, and other ag professionals. ATTRA is located in Fayetteville, AR. ATTRA staff members prefer to receive request for information via 800-346-9140. ATTRA maintains a web site at www.attra.org

The Good Grazer Group (GGG) is a network of livestock producers mainly from northwest Arkansas but includes producers from many other states including Virginia, Missouri, and Oklahoma to name a few. GGG maintains a electronic mailing list on which members routinely share information and opinions regarding various

Information regarding the ***Arkansas Cooperative Extension Service and the Division of Agriculture*** can be found on the internet at the following web site: www.uaex.edu.

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Attention

Are you interested in a person to speak at a meeting of your civic or agricultural group? If so, please contact David Brauer at 501-675-3834 to see if we can match your interests/needs to the expertise of the Center's staff.

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If you did not receive this newsletter by mail and would like to do so, please contact the Center and we will place you on our mailing list.

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Upcoming Events

February 24, 2001- Logan County Cooperative Extension and the Center are co-hosting a program on corral design and cattle handling. Program will begin about 10:30 am at the Center's headquarters. For additional information please call Larry Campbell at 501-963-2360 or Stacy McCollough at 501-675-2787 or the Center at 501-675-3834.

June 2, 2001- The Dale Bumpers Small Farms Research Center Field Day. Research, demonstrations and extension activities of ARS, NRCS and AR Cooperative extension will be featured. Details to follow at a later date.

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